

# RE-DISCOVERY OF *CALAMOVILFA CURTISSII* (GRAMINEAE) IN THE FLORIDA PANHANDLE

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## ABSTRACT

The range of *Calamovilfa curtissii* (Gramineae) in the Florida panhandle has been re-discovered and expanded. Observations on habitat, soils, associated species, and flowering response to fire are reported.

The Florida Natural Areas Inventory (FNAI) tracks populations of rare species in Florida, of which Curtiss' sand grass, *Calamovilfa curtissii* (Vasey) Scribn., is one. According to the published literature, this perennial grass is endemic to Florida in two disjunct regions: the northeast coast of the peninsula in Brevard, Volusia, St. Johns, and Duval counties (Kral 1983) and the panhandle in Santa Rosa and Okaloosa counties (Thieret 1966). However, none of the major Florida herbaria had specimens from the latter two (panhandle) counties. A query of major herbaria in the eastern United States turned up two specimens in the U.S. National Arboretum from Santa Rosa County. These were labelled "Grasses of the W.A. Silveus Collection, San Antonio, Texas" and had been collected on 14 August and 25 September, 1939 from "low damp ground - coast road east from Pensacola, U.S. 98."

Accordingly, in August 1987 we checked the area east of Pensacola as described and found two populations of *C. curtissii* whose identity was confirmed by John Thieret (KNK), David Hall (FLAS), and Robert Kral (VDB). Subsequent fieldwork uncovered over thirty sites for the species on the Florida panhandle in Santa Rosa, Okaloosa, Walton and Bay counties (Fig. 1). One specimen from the Florida panhandle was deposited in each of the following: FLAS, FSU, KNK, NA, NY, UWFP, as well as at Tall Timbers Research Station, Tallahassee, and at Eglin Air Force Base, Niceville.

In the Florida panhandle, *C. curtissii* appears to be confined to the coastal plain below the 50-foot contour line in the four counties. Searches on



adjacent barrier islands, as well as in suitable habitat on the coastal plain of neighboring Escambia and Gulf counties failed to turn up any populations (Fig. 1).

The plant occurs in wiregrass (*Aristida stricta*; nomenclature in this paper follows Clewell 1981) flatwoods where it occupies the lightly shaded ecotone between the lower, wetter, unshaded areas of wiregrass, pitcher plants (*Sarracenia* spp.) and *Sphagnum* moss, and the slightly higher, drier areas with heavier shade from gallberry (*Ilex glabra*) and slash pine (*Pinus elliotii*). A second habitat for the species is in depressions known as temporary ponds surrounded by more xeric communities dominated by turkey oak (*Quercus laevis*) or sand pine (*Pinus clausa*). In these situations it may form monospecific stands without admixture with wiregrass. It is distinguishable in the field as large clumps, (up to 1 m diameter), resembling a head of hair, in the midst of the smaller, finer-bladed clumps of wiregrass. It can be distinguished from clumps of *Andropogon* spp. with which it grows by its longer, more scabrous leaf blades and short, thick rhizome. It often occurs on Leon Sand, a soil type with upper horizons colored dark gray by organic matter and a water table close to the surface during the rainy season (Soil Survey of Santa Rosa County, Florida 1980). Only populations that had signs of being recently burned or mechanically disturbed were flowering profusely; most populations visited during flowering season (July-October) had few or no flowering stalks. In its flowering response to fire it resembles the associated wiregrass, as well as cutthroat grass (*Panicum abscissum*), a species endemic to similar habitats in south central Florida (Myers and Boettcher 1987). Although *C. curtissii* occurs on many sites and has a population probably numbering in the thousands in the Florida panhandle, most of these sites are slated for real estate development. The only populations on publicly managed lands (and thus able to be protected) in the panhandle were found on Eglin Air Force Base (5 populations), Grayton Beach State Recreation Area (2 populations), and Naval Live Oaks, Gulf Islands National Seashore (1 small population).

In Brevard County, on the northeast peninsular coast, the species is known to occur only on the Kennedy Space Center, where it dominates several long, narrow coastal swales of the ridge and swale topography of Merritt Island. Kral (1983) also lists it from Volusia, St. Johns, and Duval Counties on this coast, but no herbarium specimens could be located from these counties, and fieldwork has produced only one questionable specimen (near Samsula, Volusia County; *Johnson* 8039 FSU). Appropriate wiregrass flatwoods habitat in these counties, however, might well repay a more intensive search for this rare species.



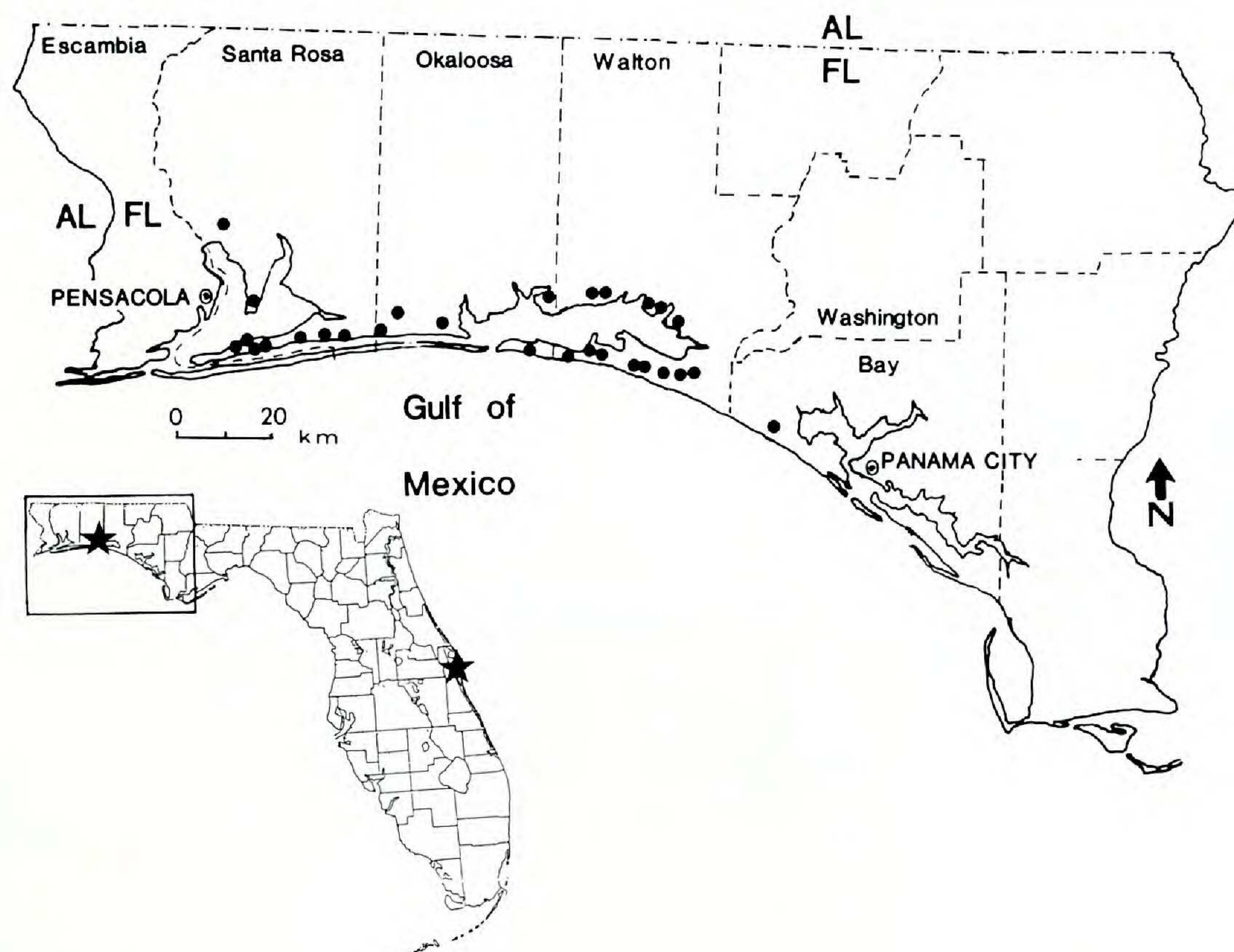


FIG. 1. Range of *Calamovilfa curtissii* in the Florida panhandle. Stars = the disjunct range of *C. curtissii* in Florida; filled circles = sites where *C. curtissii* was found in the panhandle.

A similar disjunction between the Florida panhandle and the peninsula is seen in the ranges of several other Florida endemics (Kral 1983), i.e. *Andropogon arctatus*, *Manisurus tuberculosa*, *Nolina atropocarpa*, and *Rhododendron chapmanii*, all of which are also found in wet flatwoods. One could speculate that the greatly expanded coastal terraces bordering the Gulf of Mexico during low sea level stands of glacial maxima provided a continuous wet flatwoods habitat between the panhandle and the peninsula, a habitat that was subsequently severed by sea level rise, producing the disjunct ranges we now see.

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